

REMARKS

In the outstanding Office Action, claims 1-20 were presented for examination. Applicants respectfully request reconsideration of the claims in view of following remarks.

Claims 1, 2, 6, 9, 12, 14, 15 and 19 were rejected under 35 U.S.C. § 103(a) based on Suzuki et al. (U.S. Patent No. 4,878,499) and Knapp, II et al. (U.S. Patent No. 6,740,046).

Applicants submit that no proper motivation has been provided for the combination of Suzuki et al. and Knapp, II et al.

Referring to Knapp, II et al., the reference is directed to an apparatus for enhancing patient compliance during inspiration measurements. The apparatus utilizes a flexible “conductor” or “conductive loop”, which may be sewn into a flexible elastic belt. See column 4, lines 6-19. Applicants note that the flexible “conductor” of Knapp, II et al. would generate undesirable image artifacts on X-ray images of a patient generated by the system of Suzuki et al. Accordingly, the combination of the teachings of Suzuki et al. and Knapp, II et al. would impair and/or destroy the functionality of Suzuki et al. by generating undesirable image artifacts in X-ray images of a patient.

In addition, combining Knapp, II et al. with Suzuki et al. by coupling the flexible elastic belt disclosed in Knapp, II et al. to the pressure detector of Suzuki et al. would impair and/or destroy the functionality of the respiration detector disclosed in Suzuki et al. Applicants note that the pressure detector of Suzuki et al. would not be able to generate a measurement signal indicative of an amount of displacement of the flexible elastic belt disclosed in Knapp, II et al. Accordingly, applicants respectfully submit that no proper motivation has been identified for the combination of Suzuki et al. and Knapp, II et al.

Accordingly, because no proper motivation has been provided for the combination of Suzuki et al. with Knapp, II et al., applicants submit that claims 1, 2, 6, 9, 12, 14, 15, and 19 are allowable over these references.

Applicants further submit that the combination of Suzuki et al. and Knapp, II et al. does not teach each and every limitation of claims 1, 2, 6, 9, 12, 14, 15, 19.

Referring to independent claim 1, the claim recites in part:

"a plastic cord that is configured to be placed across a chest of a person, the plastic cord being substantially transparent to x-rays; and, a sensor coupled to the plastic cord generating a measurement signal indicative of an amount of displacement of the plastic cord during respiration by the person."

As noted by the examiner in the previous Office Action dated April 4, 2006, Suzuki et al. does not teach "a plastic cord that is configured to be placed across a chest of a person, the plastic cord being substantially transparent to x-rays". See O.A. dated 4/24/06, pg. 2.

Referring to Knapp, II et al., the reference provides a patient interface in the form of a flexible conductor, or a conductive loop that may be sewn into a flexible elastic belt. See column 4, lines 5-18. Accordingly, Knapp, II et al. does not provide any teaching of a plastic cord that is configured to be placed across a chest of a person, the plastic cord being substantially transparent to x-rays, as recited in independent claim 1. In contrast, Knapp, II et al. utilizes a flexible conductor that would not be substantially transparent to x-rays when combined with the Suzuki et al. reference. Thus, Suzuki et al. and Knapp, II et al. alone or in combination fail to teach "a plastic cord that is configured to be placed across a chest of a person, the plastic cord being substantially transparent to x-rays".

Referring to Suzuki et al., the reference does not provide any teaching of a sensor coupled to a plastic cord generating a measurement signal indicative of an amount of displacement of the plastic cord during respiration by the person, as recited in claim 1. Rather, Suzuki et al. utilizes a pressure detector coupled to an air bag for detecting respiration of a patient. While the pressure detector disclosed in Suzuki et al. may detect the pressure inside an air bag, it does not provide a measurement signal indicative of an amount of displacement of a plastic cord, as recited in independent claim 1.

Referring to Knapp, II et al., the reference provides an inspiration volume amplifier circuit including "circuitry for measuring the inductance of the patient interface to provide an analog amplifier output signal 26 indicative of the patient's instantaneous inspiration volume." See column 3, lines 63-67. Knapp, II et al., however, does not provide any teaching of a sensor coupled to the plastic cord generating a measurement signal indicative of an amount of

displacement of the plastic cord during respiration by the person, as recited in independent claim 1. In contrast, Knapp, II et al. utilizes a circuit that measures the inductance of a flexible conductor to determine inspiration volume.

Thus, Suzuki et al. and Knapp, II et al. alone or in combination fail to teach " a sensor coupled to the plastic cord generating a measurement signal indicative of an amount of displacement of the plastic cord during respiration by the person".

Accordingly, because the combination of Suzuki et al. and Knapp, II et al. does not teach each and every limitation of independent claim 1, and claims 2 and 6 which depend from claim 1, applicants submit that claims 1, 2, and 6 are allowable over these references.

Referring to independent claim 9, the claim recites in part:
"disposing a plastic cord across a chest of the person, the plastic cord being substantially transparent to x-rays; and, generating a measurement signal indicative of an amount of displacement of the plastic cord during respiration by the person utilizing a sensor coupled to the plastic cord."

As discussed above, the Suzuki et al. and the Knapp, II et al. references alone or in combination do not provide any teaching of disposing a plastic cord across a chest of the person, the plastic cord being substantially transparent to x-rays, as recited in claim 9. Further, the references also do not provide any teaching of generating a measurement signal indicative of an amount of displacement of the plastic cord during respiration by the person utilizing a sensor coupled to the plastic cord, as recited in claim 9.

Accordingly, because the combination of Suzuki et al. and Knapp, II et al. does not teach each and every limitation of independent claim 9, and claim 12 which depends from claim 9, applicants submit that claims 9 and 12 are allowable over these references.

Referring to independent claim 14, as amended, the claim recites in part:
a plastic cord that is configured to be placed across a chest of a person lying on the tabletop, the plastic cord being substantially transparent to x-rays; and, a sensor operatively coupled to the plastic cord generating a measurement signal indicative of an amount of

displacement of the plastic cord during respiration by the person, the sensor being outside a scanning area of the X-ray device."

As discussed above, the Suzuki et al. and the Knapp, II et al. references alone or in combination do not provide any teaching of a plastic cord that is configured to be placed across a chest of a person lying on the tabletop, the plastic cord being substantially transparent to x-rays, as recited in claim 14. Further, the references do not provide any teaching of a sensor operatively coupled to the plastic cord generating a measurement signal indicative of an amount of displacement of the plastic cord during respiration by the person, the sensor being outside a scanning area of the X-ray device, as recited in claim 14.

Accordingly, because the combination of Suzuki et al. and Knapp, II et al. does not teach each and every limitation of independent claim 14, and claims 15 and 19 which depend from claim 14, applicants submit that claims 15 and 19 are allowable over these references.

Claims 3-5, 7, 8, 10, 11, 13, 16-18, and 20 were rejected under 35 U.S.C. § 103(a) based on Suzuki et al. and Watson et al. (U.S. Patent No. 4,308,872).

Applicants submit that no proper motivation has been provided for the combination of Suzuki et al. and Watson et al.

Referring to Watson et al., the reference is directed to an apparatus for monitoring respiration. The apparatus utilizes an electrically conductive loop that is constructed from gauge stranded copper. See column 3, lines 24-32 and column 4, lines 62-65. Applicants note that the conductive copper loop of Watson et al. would generate undesirable image artifacts on X-ray images of a patient generated by the system of Suzuki et al. Accordingly, the combination of the teachings of Suzuki et al. and Watson et al. would impair and/or destroy the functionality of Suzuki et al. by generating undesirable image artifacts in X-ray images of a patient. Accordingly, applicants respectfully submit that no proper motivation has been identified for the combination of Suzuki et al. and Watson et al.

Accordingly, because no proper motivation has been provided for the combination of Suzuki et al. and Watson et al., applicants submit that claims 3-5, 7, 8, 10, 11, 13, 16-18, and 20 are allowable over these references.

Applicants further submit that the combination of Suzuki et al. and Knapp, II et al. does not teach each and every limitation of claims 3-5, 7, 8, 10, 11, 13, 16-18, and 20.

Claims 3-5 and 7-8 depend from independent claim 1 and include all of the limitations of claim 1. As noted by the examiner in the previous Office Action dated April 4, 2006, Suzuki et al. does not teach "a plastic cord that is configured to be placed across a chest of a person, the plastic cord being substantially transparent to x-rays". See O.A. dated 4/24/06, pg. 2. Further, as discussed above, Suzuki et al. also does not teach "a sensor coupled to the plastic cord generating a measurement signal indicative of an amount of displacement of the plastic cord during respiration by the person", as recited in claim 1.

Referring to Watson et al., the reference utilizes an electrically conductive loop that is constructed from gauge stranded copper for monitoring respiration. See column 3, lines 24-32 and column 4, lines 62-65. Watson et al., however, does not provide any teaching of a plastic cord that is configured to be placed across a chest of a person, the plastic cord being substantially transparent to x-rays, as recited in claim 1. In contrast, Watson et al. utilizes the electrically conductive loop constructed from copper that would not be substantially transparent to x-rays.

Further, Watson et al. does not provide any teaching of a sensor coupled to the plastic cord generating a measurement signal indicative of an amount of displacement of the plastic cord during respiration by the person, as recited in claim 1. Rather, Watson et al. recites a "circuit that reliably and accurately measures changes in the inductance of the conductive loop mounted on the body encircling tube."

Accordingly, because the combination of Suzuki et al. and Watson et al. does not teach each and every limitation of independent claim 1, and claims 3-5 and 7-8 which depend from claim 1, applicants submit that claims 3-5 and 7-8 are allowable over these references.

Claims 10, 11 and 13 depend from independent claim 9 and include all of the limitations of claim 9. As noted by the examiner in the previous Office Action dated April 4, 2006, Suzuki et al. does not teach "disposing a plastic cord across a chest of the person, the plastic cord being substantially transparent to x-rays". See O.A. dated 4/24/06, pg. 2. As discussed above, Suzuki et al. also does not teach "generating a measurement signal indicative of an amount of

displacement of the plastic cord during respiration by the person utilizing a sensor coupled to the plastic cord", as recited in claim 9.

Referring to Watson et al., as discussed above, the reference does not provide any teaching of: "disposing a plastic cord across a chest of the person, the plastic cord being substantially transparent to x-rays; and, generating a measurement signal indicative of an amount of displacement of the plastic cord during respiration by the person utilizing a sensor coupled to the plastic cord", as recited in claim 9.

Accordingly, because the combination of Suzuki et al. and Watson et al. does not teach each and every limitation of independent claim 9, and claims 10, 11 and 13 which depend from claim 9, applicants submit that claims 10, 11 and 13 are allowable over these references.

Claims 16-18, and 20 depend from independent claim 14 and include all of the limitations of claim 14. As noted by the examiner in the previous Office Action dated April 4, 2006, Suzuki et al. does not teach "a plastic cord that is configured to be placed across a chest of a person lying on the tabletop, the plastic cord being substantially transparent to x-rays". See O.A. dated 4/24/06, pg. 2. Further, as discussed above, Suzuki et al. also does not teach "a sensor operatively coupled to the plastic cord generating a measurement signal indicative of an amount of displacement of the plastic cord during respiration by the person, the sensor being outside a scanning area of the X-ray device", as recited in claim 14.

Referring to Watson et al., the reference does not provide any teaching of: "a plastic cord that is configured to be placed across a chest of a person lying on the tabletop, the plastic cord being substantially transparent to x-rays; and, a sensor operatively coupled to the plastic cord generating a measurement signal indicative of an amount of displacement of the plastic cord during respiration by the person, the sensor being outside a scanning area of the X-ray device", as recited in claim 14.


Accordingly, because the combination of Suzuki et al. and Watson et al. does not teach each and every limitation of independent claim 14, and claims 16-18, and 20 which depend from claim 14, applicants submit that claims 16-18, and 20 are allowable over these references.

Claims 7, 8, and 20 were rejected under 35 U.S.C. § 103(a) based on Suzuki et al. and Applicants supposed admitted prior art. Applicants respectfully disagree with the Examiner's characterization of the specification and assert that the Examiner has misconstrued the teachings of the specification. Applicants note that the specification did indicate that the x-ray device 12 and a pulley are "conventional." However, Applicants note that nowhere in application 10/707775 did the application recite or infer that: "a system that has a tabletop having a securing device and a pulley coupled thereto, wherein a first portion of the strapping device extends between securing device and the pulley, the securing device and the pulley being positioned on the tabletop to allow the chest of the person to be disposed between the securing device and the pulley, and wherein a second portion of the strapping device extends from the pulley to the sensor are conventional in the art...", as asserted by the Examiner. Accordingly, applicants submit that the Examiner's foregoing assertion is simply incorrect and unsupported.

In view of the foregoing remarks, applicants respectfully submit that the instant application is in condition for allowance. Such action is most earnestly solicited. If for any reason the Examiner feels that consultation with applicants' attorney would be helpful in the advancement of the prosecution, the Examiner is invited to call the telephone number below for an interview.

If there are any charges due with respect to this Amendment or otherwise, please charge them to Deposit Account No. 07-0845.

Respectfully Submitted,
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